

## **Certificate of Analysis for NR-45153**

## Influenza A Virus, A/red knot/Delaware/541/1988 (H4N6)

Catalog No. NR-45153

**Product Description:** Pooled allantoic fluid from specific pathogen free (SPF) embryonated chicken eggs<sup>1</sup> infected with influenza A virus, A/red knot/Delaware/541/1988 (H4N6)

Lot<sup>2</sup>: 62761352 Manufacturing Date: 04SEP2014

TEST	SPECIFICATIONS	RESULTS
Identification by Infectivity Using Embryonated Chicken Eggs <sup>1</sup> Hemagglutination activity using allantoic fluid from infected eggs and 0.5% chicken red blood cells	Positive	Positive
Sequencing of Hemagglutinin and Matrix Coding Regions Hemagglutinin (740 nucleotides)  Matrix (791 nucleotides)	Consistent with A/red knot/Delaware/ 541/1988 (H4N6)  Consistent with A/red knot/Delaware/ 541/1988 (H4N6)	100% identity with A/red knot/Delaware/ 541/1988 (H4N6) (GenBank: CY101482) 99% identity with A/red knot/Delaware/ 541/1988 (H4N6) (GenBank: CY101483)
Titer by CEID <sub>50</sub> Assay <sup>3,4</sup> in Embryonated Chicken Eggs <sup>1</sup>	Report results	$5.0 \times 10^8$ CEID <sub>50</sub> per mL
Sterility (21-day incubation) Harpo's HTYE broth <sup>5</sup> , 37°C and 26°C, aerobic Trypticase soy broth, 37°C and 26°C, aerobic Sabouraud broth, 37°C and 26°C, aerobic Blood agar, 37°C, aerobic Blood agar, 37°C, anaerobic Thioglycollate broth, 37°C, anaerobic DMEM with 10% FBS, 37°C and 5% CO <sub>2</sub>	No growth	No growth
Mycoplasma Contamination  Agar and broth culture (14-day incubation at 37°C)  DNA detection by PCR of extracted Test Article nucleic acid	None detected None detected	None detected None detected

<sup>&</sup>lt;sup>1</sup>9- to 11-day-old SPF Embryonated Chicken Eggs acquired from B&E Eggs, York Springs, Pennsylvania

Date: 04 DEC 2014 Signature: Michael Q. Gpy ha

**Title:** Technical Manager, BEI Authentication or designee

ATCC<sup>®</sup>, on behalf of BEI Resources, hereby represents and warrants that the material provided under this certificate has been subjected to the tests and procedures specified and that the results described, along with any other data provided in this certificate, are true and accurate to the best of ATCC<sup>®</sup>'s knowledge.

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<sup>&</sup>lt;sup>2</sup>Grown in the allantoic cavity of embryonated chicken eggs<sup>1</sup> for 2 days at 35°C in a humidified chamber

<sup>&</sup>lt;sup>3</sup>The Chicken Embryo Infectious Dose 50% (CEID<sub>50</sub>) is the dilution of virus that under the conditions of the assay can be expected to infect 50% of the inoculated embryonated chicken eggs, just as a Lethal Dose 50% (LD<sub>50</sub>) is expected to kill half of the animals exposed. A reciprocal of the dilution required to yield the CEID<sub>50</sub> provides a measure of the infectious titer (or infectivity) of a virus preparation.

<sup>&</sup>lt;sup>4</sup>2 days at 35°C in a humidified chamber

<sup>&</sup>lt;sup>5</sup>Atlas, Ronald M. <u>Handbook of Microbiological Media</u>. 3rd ed. Ed. Lawrence C. Parks. Boca Raton: CRC Press, 2004, p. 798.